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22879 7590 04/21/2008 HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400				
EXAMINER HASSAN, AURANGZEB				
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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/783,031  
Filing Date: February 23, 2004  
Appellant(s): MARTIN, CHRISTOPHER

\_\_\_\_\_  
Benjamin J. Hauptman  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 1/22/2008 appealing from the Office action mailed 9/21/2007.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct. However in light of Appellant's arguments the rejection based upon the prior art Aoki (6,069,763) is withdrawn.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

Applicant's Admitted Prior Art **AAPA**

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 22 – 27 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over a first AAPA embodiment represented in figure 4 hereinafter “AAPA4” in view of a second AAPA embodiment represented in figures 2 and 3 hereinafter “AAPA23”.**

As per claim 22, 25, 26, 27 and 29, AAPA4 teaches a tape drive unit (403, figure 4) comprising: a data compression engine (404, figure 4) configured to selectively apply compression to an incoming data stream (data stream 402, figure 4) and output a compressed data stream (30 Mb/s data stream output from 403, figure 4); a buffer memory configured to store said compressed data stream (buffer, figure 4);

AAP4 does not explicitly disclose a monitoring and control element.

AAP23 teaches a tape drive unit comprising: a monitoring element configured to monitor a data occupancy level of said buffer memory; and a control element configured to disable said data compression engine based upon a predetermined level

of the data occupancy level of the buffered memory (disabled at 303, figure 3 which is based on the level 201, figure 2).

All the components are known in the 1<sup>st</sup> and 2<sup>nd</sup> embodiments as prior art. It would have been obvious to one of ordinary skill in the art to combine known elements in the first and second embodiments of data compression engine storing data in a buffer and having a buffer that is monitored by a predetermined level. One would be motivated to have a control monitoring mechanism of the data compressed buffer to prevent buffer overflowing.

As per claim 23, AAPA23 teaches a tape drive unit comprising: a tape transport mechanism for transporting a tape data storage medium past a transducer (head used to write to tape is the transducer); wherein said tape transport mechanism is operable to continue streaming of said tape (stream input to figure 2), whilst said data compression engine is in an enabled mode, and whilst said compression engine is in a disabled mode (figure 3 shows on and off over the axis time).

As per claim 24, AAPA23 teaches a tape drive unit comprising: a tape transport mechanism configured to transport a tape data storage medium past a transducer (head used to write to tape is the transducer); and a tape speed control element configured to control said tape transport mechanism for transporting said tape at a variable speed; wherein said tape speed is variable according to a data occupancy level of said buffer memory (figure 3 as directly related to figure 2).

**(10) Response to Argument**

Appellant's arguments in the brief filed 1/22/2008 regarding AAPA4 in view of AAPA23 have been fully considered but they are not deemed to be persuasive.

**The Appellant argues:**

On page 8, lines 22 – 27: *"Appellant respectively disagrees and submits that simply applying compression as taught by AAPA4 is distinguished from "selectively" applying compression, as recited in claim 22. Unlike AAPA4, Appellant's claimed compression engine is 'configured to disable said data compression engine based upon a predetermined level of the data occupancy level of the buffer memory.'* Appellant respectfully submits, therefore, that AAPA4 fails to disclose at least this feature of claim 22.

**Examiner's response:**

The Examiner respectfully disagrees. The Appellant states that the claimed invention necessitates "selectively" applying compression being based upon the predetermined level of the data occupancy level of the buffer memory. The Examiner notes that AAPA4 teaches selectively applying compression as can be seen in the compression ratio in paragraph [0019]. Illustrated is a 2:1 compression ratio and based upon the inherent compressibility the compression ratio teaches selectivity as it varies from 1:1 to

2:1. For the limitations of the “selectivity” be **based upon** the predetermined level the Examiner notes that the rejection was made in the combination of AAPA 4 in view of AAPA23 and accordingly the Appellant’s arguments do not address the combination. One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

**The Appellant argues:**

On page 9, lines 1 – 10: *“In addition, the Examiner admits that AAPA4 fails to explicitly disclose the monitoring and control element claimed by the Appellant and relies on Figs. 2 and 3, (“AAPA23”) to remedy the deficiencies of AAPA4. Appellant respectfully disagrees, and submits that AAPA23 only discloses monitoring a buffer to control the output of data from that buffer, and not to control disabling the compression based upon a determined data level of the buffer, as recited in claim 22.*

*Applicant’s respectfully submit that neither AAPA4 nor AAPA23 suggest the desirability of a feedback mechanism that monitors the level of compressed data in a buffer and based upon a predetermined level of data in that buffer disables the compression of data entering that buffer.”*

**Examiner’s response:**

The Examiner respectfully disagrees. The Appellant presents a two-fold argument in which there are multiple relevant points to consider. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

AAPA4 teaches a selective data compression system with buffer to store the compressed data and control element to provide the underlying functionality (figure 4, paragraphs [0019-0020]). AAPA23 was merely relied upon for its overall control capabilities associated with a control element that triggers control signals determined from a buffer level monitoring element (figures 2 and 3, paragraphs [0011-0015]) and the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

**Furthermore** the Examiner notes other rationale that AAPA4 teaches a tape drive system with a buffer memory coupled to a selective data compression engine, which has a control mechanism based upon controlling compression ratios, to store the compressed data before outputting data to a tape (figure 4, paragraphs [0019-0020]) and AAPA23 teaches a tape drive system with a control mechanism that is based upon



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monitoring a buffer memory, and outputs data to a tape (figures 2 and 3, paragraphs [0011-0015]).

All of the component parts of AAPA4 and AAPA23 were known at the time of the appellant's claimed invention the only difference is the combination of the known elements in a single input output tape drive system thus it would have been obvious to one of ordinary skill in the art to combine all the elements into a single controlled device to yield a predictable result of data steadily outputted to a tape without yielding to buffer over/underflow.

#### **(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Aurangzeb Hassan

Patent Examiner

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